

Amendments to the Claims:

1. (Currently Amended) An electrical connector, including:
a receptacle having a first end, a second end, a cavity extending toward the second end from an opening at the first end, a first ~~contact~~ detent extending into the cavity at a first distance from the opening, and a second ~~contact~~ detent extending into the cavity at a second distance from the opening, the second distance being greater than the first distance; and

a plug being removably received by the receptacle cavity, the plug having a body and a stop for limiting the extent to which the body may be inserted into the cavity, thereby defining a seated position, the body including first and second contacts that contact the first and second receptacle ~~contacts~~ detents, respectively, as the body approaches the seated position.

2. (Original) The connector of claim 1, wherein the cavity is substantially cylindrical.

3. (Cancelled)

4. (Original) The connector of claim 1, wherein the body is substantially cylindrical.

5. (Original) The connector of claim 4, wherein the stop is disposed adjacent one end of the body, the stop being annular and having a diameter that is greater than a diameter of the body.

6. (Original) The connector of claim 5, wherein the cavity includes a portion adjacent the opening for receiving the stop having a diameter substantially corresponding to the stop diameter.

7. (Original) The connector of claim 4, wherein the plug contacts are annular.

8. (Currently Amended) The connector of claim 4, wherein An electrical connector, including:

a receptacle having a first end, a second end, a cavity extending toward the second end from an opening at the first end, a first contact extending into the cavity at a first distance from the opening, and a second contact extending into the cavity at a second distance from the opening, the second distance being greater than the first distance; and

a plug being removably received by the receptacle cavity, the plug having a body and a stop for limiting the extent to which the body may be inserted into the cavity, thereby defining a seated position, the body including first and second contacts that contact the first and second receptacle contacts, respectively, as the body approaches the seated position, the body being substantially cylindrical, and each of the plug contacts includes including a ring portion having a diameter that is greater than a diameter of the body, the ring portions cooperating with the receptacle contacts to resist removal of the plug from the receptacle when the plug body is in the seated position.

9. (Original) The connector of claim 1, the body further including a first insulator between the first and second contacts.

10. (Currently Amended) The connector of claim 1, the receptacle further including a third ~~contact~~ ~~detent~~ extending into the cavity at a third distance from the opening, and a fourth ~~contact~~ ~~detent~~ extending into the cavity at a fourth distance from the opening, the third distance being greater than the second distance and the fourth distance being greater than the third distance, the plug body further including third and fourth contacts that contact the third and fourth receptacle ~~contacts~~ ~~detents~~, respectively, as the body approaches the seated position.

11. (Original) The connector of claim 10, wherein the plug body is cylindrical and the plug contacts are annular, the plug further including a first annular insulator disposed between the first and second plug contacts, a second annular insulator disposed between the second and third plug contacts, and a third annular insulator disposed between the third and fourth plug contacts.

12. (Currently Amended) ~~The connector of claim 11, wherein An electrical connector, including:~~

a receptacle having a first end, a second end, a cavity extending toward the second end from an opening at the first end, a first contact extending into the cavity at a first distance from the opening, a second contact extending into the cavity at a second distance from the opening, the second distance being greater than the first distance, a third contact extending into the cavity at a third distance from the opening, and a fourth contact extending into the cavity at a fourth distance from the opening, the third distance being greater than the second distance and the fourth distance being greater than the third distance; and

a plug being removably received by the receptacle cavity, the plug having a body and a stop for limiting the extent to which the body may be inserted into the cavity, thereby defining a seated position, the body including first, second, third, and fourth contacts that contact the first, second, third, and fourth receptacle contacts, respectively, as the body approaches the seated position, the plug body being cylindrical and the plug contacts being annular, the plug further including a first annular insulator disposed between the first and second plug contacts, a second annular insulator disposed between the second and third plug contacts, and a third annular insulator disposed between the third and fourth plug contacts, each of the first, second, and third annular insulators has~~having~~a length that is different from the lengths of the other annular insulators.

13. (Original) The connector of claim 12, wherein each of the first, second, and third annular insulators includes at least one of a first insulator section and a second insulator section, the first and second insulator sections having different lengths.

14. (Currently Amended) ~~The connector of claim 10 wherein An electrical connector, including:~~

a receptacle having a first end, a second end, a cavity extending toward the second end from an opening at the first end, a first contact extending into the cavity at a first distance from the opening, a second contact extending into the cavity at a second distance from the opening, the second distance being greater than the first distance, a third contact extending into the cavity at a third distance from the opening, and a fourth contact extending into the cavity at a fourth distance from the opening, the third distance being greater than the second distance and the fourth distance being greater than the third distance; and

a plug being removably received by the receptacle cavity, the plug having a body and a stop for limiting the extent to which the body may be inserted into the cavity, thereby defining a seated position, the body including first, second, third, and fourth contacts that contact the first, second, third, and fourth receptacle contacts, respectively, as the body approaches the seated position, the distance between the first and second plug contacts is different from the distance between the second and third plug contacts.

15. (Original) The connector of claim 14, wherein the distance between the third and fourth plug contacts is different from the distance between the first and second plug contacts and different from the distance between the second and third plug contacts.

16. (Original) The connector of claim 1, wherein the plug further includes a tip disposed adjacent a first end of the body for guiding the plug into the receptacle, the stop being disposed at a second end of the body opposite the first end.

17. (Currently Amended) An electrical connector, including:
a receptacle having a cavity and a first conductor adjacent the cavity; and
a plug having a second conductor adjacent an outer surface of the plug;
wherein a signal on the first conductor is coupled to the second conductor when the plug is substantially fully inserted into the receptacle cavity, the first conductor forming a first loop about the cavity and the second conductor forming a second loop within the plug.

18. (Original) The connector of claim 17, wherein the cavity extends from an opening in one end of the receptacle toward another end of the receptacle.

19. (Original) The connector of claim 18, wherein the cavity is substantially cylindrical.

20. (Original) The connector of claim 17, wherein the plug includes a stop for limiting the extent to which the plug may be inserted into the cavity, thereby defining a seated position, the signal being coupled from the first conductor to the second conductor when the plug is in the seated position.

21. (Original) The connector of claim 20, wherein the stop is disposed adjacent one end of the plug, the stop being annular and having a diameter that is greater than a diameter of the plug.

22. (Original) The connector of claim 17, wherein the plug is substantially cylindrical.

23. (Original) The connector of claim 18, wherein the cavity includes a portion adjacent an opening of the cavity for receiving the stop, the cavity portion having a diameter substantially corresponding to a diameter of the stop.

24. (Currently Amended) The connector of claim 17, wherein An electrical connector, including:

a receptacle having a cavity and a first conductor adjacent the cavity; and
a plug having a second conductor adjacent an outer surface of the plug, and
the plug further includes an annular ring that has an increased diameter relative to another diameter of the plug;

wherein a signal on the first conductor is coupled to the second conductor when the plug is substantially fully inserted into the receptacle cavity, and the receptacle includes~~including~~ a detent for cooperating with the ring to resist removal of the plug from the receptacle when the plug is inserted into the cavity.

25. (Cancelled)

26. (Currently Amended) The connector of claim 25~~17~~, wherein the first and the second loops are substantially planar when the plug is substantially fully inserted into the cavity.

27. (Original) The connector of claim 17, wherein the receptacle further includes a third conductor adjacent the cavity, and the plug further includes a fourth conductor adjacent the outer surface of the plug, a second signal on the third conductor being coupled to the fourth conductor when the plug is inserted into the receptacle cavity.

28. (Currently Amended) ~~The connector of claim 27, wherein An electrical connector, including:~~

a receptacle having a cavity, a first conductor adjacent the cavity, and a third conductor adjacent the cavity; and

a plug having a second conductor adjacent an outer surface of the plug and a fourth conductor adjacent the outer surface of the plug; a first signal on the first conductor is coupled to the second conductor and a second signal on the third conductor is coupled to the fourth conductor when the plug is substantially fully inserted into the receptacle cavity, the first conductor forms~~forming~~ a first loop about the cavity, the second conductor ~~forms~~ forming a second loop within the plug, the third conductor ~~forms~~ forming a third loop about the cavity, and the fourth conductor ~~forms~~ forming a fourth loop within the plug.

29. (Original) The connector of claim 28, wherein the first and the second loops are substantially planar and the third and the fourth loops are substantially planar when the plug is substantially fully inserted into the cavity.

30. (Currently Amended) ~~The connector of claim 17, wherein the receptacle is~~ An electrical connector, including:

a receptacle located within an overbed table having a cavity and a first conductor adjacent the cavity; and

a plug having a second conductor adjacent an outer surface of the plug;
wherein a signal on the first conductor is coupled to the second conductor
when the plug is substantially fully inserted into the receptacle cavity.

31. (Original) An electrical connector, including:

a receptacle having a first end, a second end, a cavity extending toward the second end from an opening at the first end, a first contact movably supported by the receptacle, and a second contact movably supported by the receptacle;

a plug being removably received by the receptacle cavity, the plug including first and second contacts; and

an actuator supported by the receptacle, the actuator including

a first cam disposed adjacent the first receptacle contact, a second cam disposed adjacent the second receptacle contact, and an engagement portion configured to be contacted by the plug as the plug approaches a seated position;

wherein further movement of the plug to the seated position moves the engagement portion, thereby causing the first cam to move the first receptacle contact into engagement with the first plug contact, and the second cam to move the second receptacle contact into engagement with the second plug contact.

32. (Original) The connector of claim 31, wherein the engagement portion extends beyond the second end of the receptacle.

33. (Original) The connector of claim 31, wherein the engagement portion extends into the cavity adjacent the second end of the receptacle.

34. (Original) The connector of claim 31, wherein the engagement portion extends into the cavity adjacent the first end of the receptacle.

35. (Original) The connector of claim 31, wherein a portion of the actuator is disposed within a channel formed in the receptacle.

36. (New) The connector of claim 8, the receptacle further including a third contact extending into the cavity at a third distance from the opening, and a fourth contact extending into the cavity at a fourth distance from the opening, the third distance being greater than the second distance and the fourth distance being greater than the third distance, the plug body further including third and fourth contacts that contact the third and fourth receptacle contacts, respectively, as the body approaches the seated position.

37. (New) The connector of claim 36, wherein the distance between the first and second plug contacts is different from the distance between the second and third plug contacts.

38. (New) The connector of claim 36, wherein any two plug contacts are simultaneously in contact with any two receptacle contacts only when the plug reaches the seated position.

39. (New) The connector of claim 24, wherein resistance produced by the interaction of the detent and ring to resist plug removal can be overcome by force exerted by a human arm.

40. (New) The connector of claim 24, the receptacle further including a third contact extending into the cavity at a third distance from the opening, and a fourth contact extending into the cavity at a fourth distance from the opening, the third distance being greater than the second distance and the fourth distance being greater than the third distance, the plug body further including third and fourth contacts that contact the third and fourth receptacle contacts, respectively, as the body approaches the seated position, the distance between the first and second plug contacts differing from the distance between the second and third plug contacts.

41. (New) The connector of claim 30, wherein the first conductor is annular.